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Translational and rotational motions of molecules in solutions of CO2 in n-paraffins

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Abstract

The 1H, 17O, and 13C nuclear magnetic spin-lattice relaxation times and the self-diffusion coefficients of paraffin molecules in solutions of carbon dioxide in liquid n-paraffins were measured. The influence of each solution component on the translational and rotational mobility of second component molecules was characterized. The mobilities of initial component molecules are related to the solubility of CO2 in n-paraffins.